

Specification:

Please Cancel the title as filed, and replace with the following:

– A Time Slot Sorting Method For A Wireless Network –.

At page 1, before line 1, please insert the following centered heading:

– Background of the Invention –;

after line 24, please insert the following centered heading:

– Summary of the Invention –;

please amend the paragraph beginning at line 27 as follows:

One object of the invention is providing an optimized time slot sorting mechanism. Another object of the invention includes a wireless network which implements a time slot sorting mechanism is used.

At page 2, please amend the paragraph beginning at line 1 as follows:

In one embodiment of the invention, The object is achieved by a wireless network is provided which implements a time slots sorting method, the time slots sorting method optimized for use in such a wireless network of the type defined in the opening paragraph, in that, after all the requests have been received, the central station is provided for In one form, the inventive method includes

—determining a first subset from a set of which contains all the transmitting terminals comprising the network, the first subset defined by a characteristic that each transmitting terminal included in the first subset intends to transmit packets to a plurality of receiving terminals, such that and a second subset is further determined which comprises all contains the rest of the transmitting terminals remaining in the set which do not comprise the first subset,

—determining the order in which the transmitting terminals of the first subset transmit in dependence upon a accordance with the decreasing number of receiving terminals assigned to each transmitting terminal therein,

—subdividing the receiving terminals assigned to of each transmitting terminal of the first subset assigned to a transmitting terminal into a first group, which

first group contains all the receiving terminals designated already used as transmitting terminals, such that and into a second group is formed comprising which contains all the other receiving terminals,

—determining the receiving order in the first group and second group two groups in accordance with the transmission order of each respective as a transmitting terminal, and

—first selecting the receiving terminal of the second group to receive data first in time.

At page 3, please amend the paragraph beginning at line 4 as follows:

The In the claims 2 and 3 are shown different methods of the inventions include subdividing the transmitting terminals of the second subset into the transmission order of the first subset. The inventions further include a wireless network with relates to a central station in a wireless network having a plurality of terminals, which implement an inventive method as described.

between lines 7 and 8, please insert the following centered heading:

— Description of the Drawing Figures —; and

please amend the paragraph beginning at line 8 as follows:

Examples of at least one embodiment of inventive wireless networks implementing the methods of the inventions will be further explained/described with reference to Figs. 1 and 2. The Figures each show each examples of the embodiments of wireless networks for packet transmission, within which the inventive methods are implemented.;

between lines 10 and 11, please insert the following centered heading:

— Detailed Description of the Invention —;

please amend the paragraph beginning at line 11 as follows:

The network as shown in Fig. 1 comprises a base station configuration, which as shown in Fig. 1 includes various base stations 1 to 3. The base stations which control the communication between various wireless terminals 4. The base station 1 is coupled via a connecting station 5 (gateway) to a wire-bound network 6 and exchanges

packets between the connecting station 5 and a certain base station 2 and/or 3 in dependence on the address of a packet. The connecting station 5 is used for exchanging packets containing, for example, audio and video data between the wire-bound and a wireless network which comprises base stations 1 and 3 and terminals 4. The base stations 2 and 3 include each a transceiver device by which they exchange data with the terminals 4 via radio links 7. The base stations 1 to 3 and the connecting station 5 are typically interconnected via optical or metallic cables ; and

please amend the paragraph beginning at line 21 as follows:

The network shown in Fig. 2 ~~reflects with an ad hoc configuration of a network of this invention, and~~ includes various wireless terminals 8 to 11, of which one terminal is referred to as a controller. The controller controls the communication between the terminals. The terminal 8 is coupled to a wire-bound network 13 via a connecting station 12 (gateway). The connecting station 12 is typically connected to the wire-bound network and the terminal 8 via optical or metallic cables. The wireless terminals 8 to 11 (and also the terminals 4 in Fig. 1), which have each a transceiver device and at least one terminal station, exchange data via radio links 14. A terminal station may be, for example, a personal computer, a video camera, a digital telephone, a digital television or a set top box.

At Page 4, please amend the paragraph beginning at line 23 as follows:

With the algorithm to be described, an integer number of N of time slots is first determined by the base station or the controller ~~is started from,~~ which time slots are rendered available by a TDMA frame for the data transmission. The algorithm decides which N_{ij} (where i is an integer number representative of a number of transmitting terminals, and j is an integer number representative of a number of receiving terminals) time slots are assigned for the transmission of data from a transmitting terminal WT_i to a receiving terminal WT_j for the following TDMA frame. N_{ij} thus denotes the number of time slots for a terminal WT_i that expect would like to transmit packets to the terminal WT_j . For example, 3 packets are to be transmitted from a terminal WT_1 to a terminal WT_2 $\{(N=3)_{1_2}\}$, 4 packets from the terminal WT_1 to the terminal WT_4 $\{(N=5)_{1_4}\}$, 4 packets from the terminal WT_1 to the terminal WT_3 $\{(N=4)_{1_3}\}$.

1 packet from the terminal WT_3 to the terminal WT_1 $\{(N = 1)_{3_1}\}$, 2 packets from the terminal WT_3 to the terminal WT_2 $\{(N = 2)_{3_2}\}$, 2 packets from the terminal WT_2 to the terminal WT_3 $\{(N = 2)_{2_3}\}$, 3 packets from the terminal WT_2 to the terminal WT_4 $\{(N = 3)_{2_4}\}$ and 5 packets from the terminal WT_4 to the terminal WT_2 $\{(N = 5)_{4_2}\}$. Here $(N = x)_{i_j}$ means that N_{i_j} time slots are provided for a terminal WT_i, which transmits x packets to the terminal WT_j.